猜想

前言

此篇文章算是一個小擴充吧，而上篇文章《the-Idea-of-the-Pen-and-the-World》則是嘗試勇我的假想來描述各式現象。建議先看過上篇的實例，再來看此篇來了解背後的意涵。

假設

*本文章所有英文部分引用於上篇文章《the-Idea-of-the-Pen-and-the-World》

S-N-E-x system

S-N-E-x system, is the fundamental system that describes how the universe evolves over time[1]. Basically it says that to describe a property (like heat, position, etc.) of an object in the universe requires 4 variables which always satisfy Equation 1:

- S, is the value that we/human observes
- N and E represents the perspective of the particle relative to ours,
  - N is the position of origin
  - E is the position of point 1, hence E-N is the unit length
  - As all 4 variables are relative to us, our perspective is constant N=0, E=1[2]. And if we're interacting to any particle, their perspective is forced to be same as us.
- x is the value that the particle itself observes, which always satisfy the following equation

$$\frac{S-N}{E-N}=x \quad \text{(Equation 1)}$$

Suppose that existence (denoted as ***B***) sustain a particle's existence, we could suggest that:

$|E-N| \propto B$, when excluding all other *Perspective Rules* (Equation 2)

And the minimum required ***B*** in order to prevent particles crashing into *Information Point* is denoted as $\boldsymbol{B_m}$.

Group of laws

By defining S-N-E-x system, we could now categorized physics laws into 3 categories:

I. *Normal Rules*, who governs the change of ***x*** over time, is rules that doesn't require change in perspective or frame of reference. Those laws might just simply have

1 But notice the ***time*** we experienced is also described by S-N-E-x system, and the time that the S-N-E-x system is evolving along is often referred as ***step***.

2 More precisely |E-N| = 1

nothing to do with perspective (like Newtonian Physics), or a modified version with perspective parts stripped out.

II. *Perspective Rules*, is rules that govern the change of ***N, E*** over time, and also the rule that control whether a particle will crash into *Information Point*. The feeling of curved space-time is created through these rules. Notice that *Perspective Rules* doesn't apply on humanity, as the system are all built relative to us.

III. *Information Point Rules*, the rule that governs the decay/destruction of S-N-E-x system when it enters *Information Point* and also the formation of new S-N-E-x system, is built upon a chaotic system which is response to the perspective inversion. Description of Quantum Field Theories' creation/destruction of particles and Quantum Randomness are base on these rules.

Der *Information Point*: the pen that draws the universe[3]

Universe is a chunk of thing, which we call information for now, that's gather in the *Information Point*.

The *Information Point* by definition, is a point that doesn't belongs to any number system (like real number, complex number), nor does it have any unit. It's a point, where everything gets destroyed and only information is left.

To create a particle, you'll pull/spit a specific amount of information arranged in a specific alignment out from the *Information Point* into our space. And any particle could crash back to *Information Point* which will turn back into information and stored in *Information Point* which we referred as Destruction of particle.

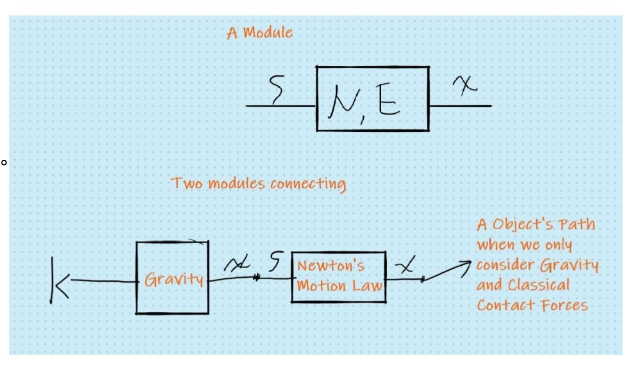
In order for a particle to stay in the space, the particle itself has to constantly proposes existence to itself (or the part inside the particle has to propose existence to others) to prevent them from crashing back into *Information Point*. Much like you need recognition in your social, or protons requires the quark inside it to constantly exchange gluons to keep the proton intact. When the existence proposed isn't enough to sustain one particle's existence, the particle will either break into parts and some parts falls back into *Information Point*, or the whole particle will just fall into *Information Point* and been wiped out from the space.

3 *Der Information Point* is originally created to resolve the "division by 0" issue which we must encounter in Equation 1, the full derivation is written at the Extras section, The derivation of der Information Point.

終極簡化論

我們要做一個萬物論（Theory of Everything）就是要在萬物中找到一個可以適用於萬物上的規律、模板，我們稱之為 s-N-E-x 模組。與之前的假設一樣，有四個變數 s, N, E, x，且其四個變數恆滿足 $\frac{s-N}{E-N}=x$。一個模組需含括三個常微分方程式，其二為 N 和 E 的，第三個可選擇要做 s 或 x 的，時情況而定。

在此模組上我們可以假設，若要描述一個獨立的系統（亦除該系統外無其他物理理論作用於我們要描述的東西上）我們可設 s 為一常數（為作區別可用 k 來表示，若一模組之 s 為常數稱其為基礎模組）。若 s 並非為一常數，則 s 的常微分方程式必為另一個系統的 x。而整個萬物論會像一個神經網路，最左邊會是一推常數，中間是很多層的模組，最右邊會是一個 x_{end} 也就是我們日常中所觀察到的。



重力

重力，四個基礎力之一，想必是一個基礎模組。如果今天要描述一個人自由落體，那我們可設 N=0（地心處），E=1（單位均為公尺），而為簡單 k 為其起始位置。此後我們設 L_e=E-N（即分母）。其中在此情形內 N 不可變動[4]，則可知$|L_e|$必減小才可使 x 接近地表。至此我們可稱萬有引力為一基礎模組且其 $\frac{dE}{dt}<0,\ E>N=0,\ k>0$。（此處設 E, k 皆為正數亦是為求簡單）

基礎粒子的量子場

量子場論（QFT）說粒子是該粒子所屬之量子場經刺激所產生的。在此我們可以想像量子場根本就不存在於我們的空間，而是資訊點的一部分。已定義一個東西在資訊點內是當其任一模組中的 L_e 為 0 時，則可知刺激量子場等同於使 L_e 不為 0。基於以上定義我們可以說一個量子場即是一個三為常數場（一個三為空間其中每一個點皆有一個常數）加上一個三為 L_e 場。常數場恆不變，而若要創造激發態則改變 L_e 場。

黑洞

以上兩章節大概整合了量子粒學及經典物理學（他們皆始於同一個常數場，只是不同模組），但是廣義相對論裡還有一個麻煩存在—黑洞。說實在因為黑洞（或更準確一點奇異點）本身就是一個問題，再加上進到黑洞裡時間跟空間會互換，所以我沒有要討論該怎麼解釋黑洞。我想藉此提出兩個此理論的困難點。

其一，此假想本來就是為了一維空間設計的（基於維度平等的考量[5]），所以很難計算需要涉及到兩個維度的系統（如黑洞的時間跟空間）。應該會有解決辦法，但會需要消耗很多運算資源，不過我們應該可以假設宇宙就是一個有無限精準度的電腦，也就是說是可行的但身為人類可能模擬不出來。

其二，是觀測結果一致性的問題。若用非理論方式來描述黑洞（亦所有東西被拉往同一點且外部觀測者只會看到物體凍結於事件視界），可得知物體在抵達奇異點時物體本身觀測到的位置轉外部觀測到的位置之模組（並非重力模組）的 L_e=0。但僅限於 N 為奇異點之位置，也就是說如果外部觀測指不把 N 設

4 在描述一系統，N 必須是該系統的一部分（類似年噸的慣性參考坐標系），此是為了避免觀測不一致（詳見黑洞章節）。
5 維度平等亦是本理論的核心基石之一，他說任何維度（或單位）皆平等。一個模板若能用於空間亦可用於其他維度如溫度。就好像空間中有萬有引力，溫度間有熱平衡。

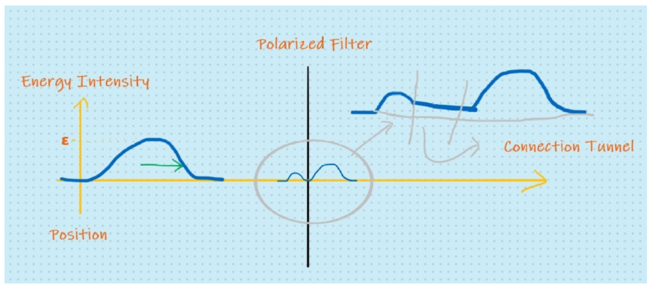
為奇異點之為至，會得到$L_e \neq 0$。對此我們應可得到結論：N 須為系統的一部分，因為若 N 不等於墜落物體或奇異點的位置，所有觀測者就得不到一致物體進入資訊點的時間。而進出資訊點應為唯一一致的觀測結果，因為在此假想中空間是被模組創造出來的（空間應為空間模組的激發態）。

The origin of the quanta

The existence of quanta is produced by the *Information Point*, cause in order to cut an always continuous system into discrete, we are required to use *Information Point* with the help of *Information Point Rules*, by using the idea of connection through *Information Point* will decay and at the end disappears.

In Quantum Mechanics, we got those discrete energy packet called quanta, or photon. We stated that they are indivisible, but why? We suggest that perhaps it isn't indivisible. You might be able to cut it in half, but just like slime, they'll just quickly re-join as your knife passes through. And what's happening behind can be described using polarized filter.

1. Classically, polarized filter should block a certain percentage of light. So suppose a single photon is divisible, and it's passing through a polarized filter that blocks 30% of light.



2. As those two chunk of energy been split further and further, since we know those two chunk shall contain roughly 30% and 70% of the original energy, the tunnel between them will be thinner and thinner. And when it gets thin enough, just like when your wire gets thinner the electric current will get lower, the tunnel and those two chunks can't propose enough existence to sustain the tunnel's existence, so it disappears.
3. As the tunnel disappears, there is no more connection between two chunk. And if the photon's structure requires that 1 quanta of energy to sustain its existence, both chunk will crash back to *Information Point*.
4. But since the destruction of the existence of the photon is only a semi-destruction, it's able to jump back to space, but not as two chunk, instead as one intact photon. And whether the photon jumps back to the left side of the polarized filter (which means it's blocked), or to the right side of the filter, is decided by a chaotic system which creates the pseudo-randomness we observed.

宇宙的起源

先假設空間為空間模組的激發態，如同光子為電磁場的激發態。則空間模組內部可區分為重力子模組及膨脹子模組，因為他們是為二會影響時空的東西（重力子模組是廣義相對論中時空扭曲的部分；而膨脹子模組應該類似於廣義相對論中的宇宙學常數 Cosmological Constant 的概念）。

目前廣泛接受關於宇宙起源的理論是宇宙膨脹（Cosmological Inflation）+大霹靂這個組合，但對於如何造成宇宙膨脹仍是一未解之謎。我們對此提出的解釋是：

0. 前一個宇宙在熱寂（Heat Death）後宇宙將只剩基礎粒子但空間仍會繼續膨脹。直到重力子模組的引力不敵膨脹子模組的力道，將導致光子撕裂並短暫跌回資訊點。
1. 然若同一瞬間內有夠多光子跌入資訊點，會形成龐大的 B（透過資訊點交換）。As we know that ***B*** is proportion to |***E-N***|. When the universe are at the very first stage where particles were just spitted out of the *Information Point*, the connection between particles through *Information Point* still exists, which results extremely large ***B***, which means to our observation an extremely tiny universe. But as the connection through *Information Point* quickly decay and vanish, the ***B*** drops exponentially and makes the unit length also drops exponentially, which results the universe to expand exponentially. And the stop of inflation, is because the decay of connection through *Information Point*, just like radiation, will at the end slows down to a stage which we consider the connection through *Information Point* doesn’t exists anymore.